

requirements.<sup>18/</sup> A period of 30-60 days should be more than sufficient to allow applicants to demonstrate that they can meet new licensing requirements.

1. Financial Qualifications

The Commission has recognized that financial qualifications are necessary to "ensure[] that the orbit-spectrum resource is not tied up by entities unable to fulfill their plans. . . ."<sup>19/</sup> Financial requirements are especially warranted where "grant of an authorization to an applicant who is not financially qualified is now likely to preclude qualified applicants from constructing and operating proposed systems. . . ."<sup>20/</sup> Therefore, "a strict application of qualification standards will result in the most efficient and expeditious provision of additional domestic satellite services required by the public."<sup>21/</sup>

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<sup>18/</sup> See, e.g., Columbia Communications Corp. v. F.C.C., 832 F.2d 189 (D.C. Cir. 1987) (The FCC is not required to hold a hearing on applications it rejects for failing to meet new financial qualifications requirements).

<sup>19/</sup> Amendment to the Commission's Rules to Allocate Spectrum for and to Establish Other Rules and Policies Pertaining to, a Radiodetermination Satellite Service, 104 F.C.C.2d 650, 663 (1986) ("RDSS Licensing Order").

<sup>20/</sup> Licensing Space Stations in the Domestic-Fixed Satellite Service, 101 F.C.C.2d 223, 231 (1985) ("Fixed-Satellite Service").

<sup>21/</sup> Id. at 224.

Rigorous financial requirements are particularly important in this proceeding because of the unprecedented capital requirements of the proposed systems. Even the smaller proposed systems will require large capital expenditures. As in the case of the Fixed-Satellite Service and RDSS proceedings,<sup>22/</sup> the Commission should require each applicant to demonstrate sufficient current assets and operating revenues to cover all construction and launch costs (i.e., for the entire system) as well as first year operating requirements. It is necessary to demonstrate the ability to fund the entire system since commercial MSS voice service cannot be offered without a virtually full constellation of orbiting and operational satellites.

Moreover, applicants should not be able to meet the financial qualifications requirement merely by presenting a plan for raising debt and equity financing, or by ephemeral pledges of financial support from third parties.<sup>23/</sup> Instead, applicants should be required to show sufficient current assets through an audited balance sheet, or to demonstrate they have irrevocable funding commitments from other entities.

The "Elements of a Consensus" principles recognized the important public interest benefit of "[n]o set asides for never-

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<sup>22/</sup> Fixed-Satellite Service, 101 F.C.C.2d at 233; RDSS Licensing Order, 104 F.C.C.2d at 664.

<sup>23/</sup> See, e.g., Scioto Broadcasters, 5 F.C.C. Rcd 5158, 5160 (Rev. Bd. 1990), aff'd, 6 F.C.C. Rcd (1991) (and cases cited therein); Ultravision Broadcasting, 1 F.C.C.2d 544 (1965).

to-be implemented systems."<sup>24/</sup> Ensuring that each applicant has the substantial financing in hand that will be required to build its proposed system provides the best guarantee that no construction permits will be granted to "never-to-be implemented systems."

## 2. Technical Standards

The Commission should also require that any MSS/RDSS system it licenses in the 1610-1626.5/2483.5-2500 MHz bands provide continuous coverage of the entire United States, including all offshore points.

The intent of Congress, as expressed in Section 1 of the Communications Act of 1934, as amended, was, inter alia, for the Commission to "make available . . . to all the people of the United States" a "Nation-wide and world-wide . . . radio communication service." See 47 U.S.C.A. §151 (1991). Because of their inherent capability to provide service everywhere in the U.S., satellites are uniquely able to effectuate this statutory mandate by delivering nationwide service. As the Commission has stated, the need for MSS is:

predicated upon the statutory demand for universal communication service, and upon the simple fact that satellite service can be ubiquitous . . . . MSS proponents point out that only MSS can provide a service which is truly universal and is not dependent upon

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<sup>24/</sup> See Report, at Addendum 1.

geographic location . . . . They further state that MSS can provide high quality service where no service would otherwise exist -- for example, to the 2% of the population of the contiguous United States (CONUS) who live in areas too remote, too rugged, and/or too sparsely populated to justify construction and development of terrestrial systems -- some 5.7 million people.<sup>25/</sup>

As a result, the Commission made full and adequate coverage of CONUS a basic qualifying requirement (or, as it said, a "sine qua non"<sup>26/</sup>) for all MSS applicants.<sup>27/</sup>

A similar, but broader, standard should be adopted for the proposed LEO MSS systems in this proceeding. LEO MSS applicants should be required to cover all territories of the United States, including Alaska, Hawaii, Puerto Rico, and other offshore points, as well as all of CONUS. Because non-geostationary satellites are constantly moving, LEO systems can be designed to cover the entire U.S. In fact, many of the

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<sup>25/</sup> Notice of Proposed Rulemaking in Gen. Docket No. 84-1234, Rules to Allocate Spectrum for, and To Establish Rules and Policies Pertaining to, the Use of Radio Frequencies in Land Mobile Satellite Service for Various Common Carrier Services, 50 Fed. Reg. 8149 (February 28, 1985), at ¶ 4.

<sup>26/</sup> Id. at ¶ 46. The Commission stated that coverage of non-CONUS areas (including Alaska, Hawaii, Puerto Rico and offshore areas) would be a "comparative" factor rather than a qualifying criterion, i.e., not mandatory but a consideration that would lead the Commission to prefer one system over another if it was forced to choose between them.

<sup>27/</sup> Subsequently, the Commission licensed a consortium of MSS applicants and conditioned its license on service to CONUS, Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands, and U.S. coastal areas up to 200 miles off-shore. AMSC Authorization Order, 4 FCC Rcd. 6041, 6053 (1989).

proposed LEO MSS systems are already designed to provide such coverage. Given the scarcity of spectrum available for LEO MSS systems, the Commission should not award a construction permit or license to any LEO applicant that does not propose to provide true nationwide service.

Nationwide service, by definition, also means continuous rather than intermittent coverage of the entire United States. During periods when there is no coverage, service is not nationwide. In this connection, some LEO systems may have periods when "holes" appear in their coverage at regular intervals, e.g., five minutes out of every hour, or intermittently. When such a hole in coverage appears in a geographic area persons in that area engaged in voice communications using that system will be cut off. There is no reason for the Commission to accept such deficiencies in a system's design. Given the scarcity of the spectrum available for LEO MSS systems, and the number of applicants that are prepared to provide continuous service, the Commission should not grant licenses to any systems that do not provide continuous coverage to all parts of the United States.<sup>28/</sup>

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<sup>28/</sup> Motorola is not proposing that the Commission mandate service under all local propagation conditions occurring within a coverage area, but simply that a system must cover all of the nation, all of the time.

### 3. Legal Qualifications

For a number of reasons, the Commission should establish as a policy/legal matter that licenses in the 1610-1626.5 and 2483.5-2500 MHz bands will be awarded to LEO MSS systems only, and not to geostationary MSS satellite systems.

The first reason that these 33 MHz should be assigned exclusively to LEO MSS systems is that 68 MHz of spectrum has already been effectively ceded to geostationary MSS systems.<sup>29/</sup> By contrast, LEO MSS systems have, as yet, no spectrum assigned to them, even though the anticipated requirements for LEO MSS systems in the near term exceeds the usable spectrum under consideration in this proceeding.

The second reason this spectrum should be reserved for LEO MSS/RDSS systems is that such systems are the only ones that can offer a promising new technology able to provide global handheld services before the end of this decade. Reserving this spectrum for LEOs will give one or more of these systems an opportunity to grow without being crowded out by existing geostationary MSS systems that may be able to expand more rapidly into these bands by virtue of their established position.

The third reason this spectrum should be assigned solely to LEO MSS/RDSS systems is the increased potential for viable competition with previously licensed systems. The only

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<sup>29/</sup> This spectrum includes the 1525-1559 MHz and 1626.5-1660.5 MHz bands.

U.S. geostationary MSS applicant for this spectrum, AMSC, has already been assigned 30 MHz of spectrum for its exclusive use. In order to have viable competition with AMSC in the provision of MSS, this new MSS spectrum should be assigned to the other qualified applicants who do not have any existing authorizations, all of whom propose to construct non-geostationary systems.

B. Interim Construction and Launch  
Milestones Should Be Placed on  
Each System Permit

In order to prevent applicants granted construction permits from warehousing spectrum, the Commission should use its authority under Section 319(b) of the Communications Act, as amended, to establish construction and launch milestones and require that MSS permittees strictly adhere to them. As suggested by the "Elements of a Consensus" plan, permittees that do not meet these milestones would automatically forfeit their permits. The forfeited spectrum should then be reassigned to the other operational systems.

Following the Commission's recent proposal in the NVNG MSS proceedings,<sup>30/</sup> the Commission should establish three important milestones. First, each permittee should be required

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<sup>30/</sup> Notice of Proposed Rulemaking: Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Non-Voice, Non-Geostationary Mobile-Satellite Service, FCC 93-28 at ¶ 23. In this proceeding, the Commission proposed that the first two satellites should be launched within four years since these systems would be capable of providing some service at that time.

to begin construction, or to commit contractually to construct their full system, no later than one year after the Commission order awarding the construction permit. Second, each permittee should launch its first satellite no later than four years after such an award. Third, each permittee should launch its entire satellite constellation within six years of initial authorization. <sup>31/</sup>

Finally, any extension of milestone dates should be conditioned on a persuasive demonstration of: (1) substantial progress toward completion of the milestone, and (2) truly extraordinary circumstances.

C. Spectrum Should Only Be Assigned to Permittees As They Are Able To Provide Commercial MSS Services

The original "Elements of a Consensus" plan would have assigned spectrum to permittees as soon as they launched their first satellite. This approach does not take into account the fact that commercial MSS service cannot be provided with the first satellite of any LEO satellite system, and that the remaining spectrum possibly could be used on an interim basis by other fully operational systems.

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<sup>31/</sup> In order to ensure that all permittees are treated fairly, any one system permittee should not be allowed to meet its own milestones by joining with another permittee and sharing satellites, or to own or participate in the operations of another permittee.



A better approach is to assign spectrum only when the company operating the system can satisfactorily demonstrate that it is ready, willing and able to provide commercial MSS service. Thus, a permittee should not be assigned spectrum upon receipt of a mere authorization to construct, or even necessarily upon the launch of several satellites. Spectrum should not be assigned until an operator is prepared and able to provide commercial MSS services to the public.<sup>32/</sup>

Even a fully operational system will not need its full spectrum assignment at the start of operations. During the period when a system operator has launched some, but not all, of its satellites and has initiated commercial MSS service, the Commission should assign the operator only a portion of its full spectrum share in proportion to the percentage of its full satellite constellation that is operational. A system operator should only receive its entire spectrum allotment once its entire system is fully operational.<sup>33/</sup>

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<sup>32/</sup> Prior to commercial operation, a permittee should only be given access to a limited amount of spectrum for experimental and testing purposes.

<sup>33/</sup> As previously indicated, when more than one system becomes fully operational, the Commission could institute a procedure for the periodic reapportionment of spectrum assignments based upon traffic usage.

D. There Is No Need for a Formal Standing Committee to Oversee Spectrum Assignments and International Coordination

The original "Elements of a Consensus" plan suggested a formal standing committee would make "the actual U.S. domestic frequency assignments" as the satellites are launched, and act "as the forum to coordinate the use of the spectrum by these U.S. systems around the World." This component of the plan drew substantial objections from the applicants.<sup>34/</sup> Subsequent versions of the "Elements of a Consensus" envisioned a sharply reduced role for the standing committee.

Motorola does not see the need for a standing committee of applicants, permittees or licensees, and believes such a committee may be counterproductive.<sup>35/</sup> The Commission should be able to administer its domestic MSS spectrum assignment policies once rules are adopted without any more oversight responsibilities than it already undertakes for other satellite services. Under the approach outlined above, spectrum assignments would be relatively straightforward, based upon the percentage of the final constellation of satellites in orbit, the

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<sup>34/</sup> See Report, at Addendum 1.

<sup>35/</sup> One area where an ad hoc committee might be useful is in coordinating CDMA interference sharing arrangements, taking into account, if needed, the protection requirements of systems in existing services, assuming that the CDMA permittees believe such a committee would be helpful.

commercial availability of service, and the number of fully operational systems.

The Commission should maintain its traditional role in the international frequency coordination process similar to the one it envisions for the NVNG MSS service.<sup>36/</sup> If a standing committee of permittees were entrusted to develop and coordinate international spectrum assignments, delays would be inevitable. For example, the IRIDIUM™ system is fully developed and ready for international coordination. Meanwhile, it is clear that several of the other MSS applicants are not as far along in the development of their proposed systems. Thus, some committee members might have an incentive to delay coordination of the IRIDIUM™ system until their own systems are ready for international coordination. Such an outcome would not serve the public interest.

E. The FCC Should Not Accept New MSS Applications for These Bands

The Commission should not accept any new applications for the 1610-1626.5 and 2483.5-2500 MHz bands until it is clear that there is sufficient spectrum to accommodate new entrants. Currently, there is insufficient spectrum available if all of the six applicants proceed with their systems as proposed.

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<sup>36/</sup> Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Non-Voice, Non-Geostationary Mobile-Satellite Service, FCC 93-28 at ¶ 32.

While it is possible that only a few of the current group of applicants will ever become operational, those that do will probably need all of the spectrum in these bands. Furthermore, some of the spectrum allocated for MSS systems may not, in fact, be usable because of the need to share the bands with existing users.

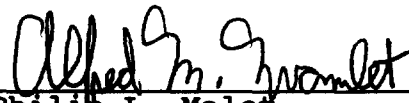
Instead of permitting new applicants in the 1610-1626.5 MHz and 2483.5-2500 MHz bands, the Commission should allocate additional spectrum to MSS. This new spectrum could accommodate new applicants and provide operational systems in the 1610-1626.5 and 2483.5-2500 MHz bands with room to expand their systems.

IV. CONCLUSION

For the foregoing reasons, the Commission should promptly issue a Notice of Proposed Rulemaking proposing the licensing and service rules suggested herein.

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